

Continuous provision: Composition of numbers to 10

Maths area

Turn the maths area into a 'Pairs to 10' station where children use ten-frames, shaking pots and small-world toys to split a group into two parts and find how many more are needed to make 10, during free-flow play rather than any sheet.

Resources

- A large floor ten-frame (laid out with tape or a mat) plus several smaller table-top ten-frames
- Pots of 10 double-sided counters (one colour on each side) with small shaking tubs or yoghurt pots with lids
- Two hoops, two small boats or two egg boxes to use as 'homes' for splitting a group into two parts
- Small-world objects to share between the two homes: 10 toy ducks, 10 teddies, 10 shells or 10 conkers
- Numeral cards 0 to 10 and a part-whole (part-part-whole) mat
- A number line or track marked 0 to 10 for checking how many more are needed

When you join the play

- You've put 6 ducks in the blue boat. How many more do we need so we have 10 altogether?
- Shake the pot and look: how many are red and how many are yellow? Do they make 9 together?
- If 4 teddies are having a nap in the box, how many are still awake, if there are 8 teddies altogether?
- What if all 10 went in one home and none went in the other home — how many would that be?
- Can you find a different way to split 8 so the two homes have different numbers in them each time?
- I can see 5 and 5 in your ten-frame. What do you notice about those two groups?

Look for

- Children splitting 8, 9 or 10 into two parts without recounting the whole group from 1
- Children noticing that swapping the two parts (for example 3 and 7, then 7 and 3) still makes the same total
- Children using the ten-frame to say how many more spaces are needed to make 10
- Children accepting zero as one of the parts (for example 10 and 0, or 0 and 10)
- Children spotting the double fact 5 and 5 when splitting 10 into two equal groups
- Children using fingers, counters or the number line to check their total rather than guessing

Construction

Turn the construction area into a 'Builders' Yard' where every structure gets made from exactly 10 bricks, crates or planks in two colours, so children meet the different ways to split 10 as they build towers, walls, ramps and bridges.

Resources

- Interlocking building bricks in two colours only, e.g. red and blue, kept in two separate crates
- Ten-frame builder trays: shallow trays or egg boxes with 10 marked spaces, for laying bricks out in a row before building
- Large hollow blocks and planks for bigger, whole-body building of walls and ramps
- Builders' hard hats and hi-vis vests for role play
- Clipboards and chunky pencils for drawing a 'site plan' showing how many bricks of each colour were used
- Number cards 0 to 10 and a large washing line or string to peg finished towers' colour totals onto
- Small crates or tubs labelled 0 to 10 for sorting loose bricks before building
- A site sign saying '10 bricks make every tower' as a visual anchor

When you join the play

- You've used 10 bricks altogether. How many are red and how many are blue?
- Could you build a different tower, still with 10 bricks, but with a different number of each colour?
- You have 6 blue and 4 red. How many bricks is that altogether?
- If your tower of 10 bricks loses 3 bricks, how many are left standing?
- Can you make a tower using 0 red bricks? How many blue would you need then, to still make 10?
- You and your friend each have some bricks. Between you there are 10. How many might each of you have?
- What's the same and what's different about your tower and your friend's tower, if they both make 10?

Look for

- Children counting out 10 bricks before they start building, rather than building first and counting after
- Children rebuilding the same tower with a different split of the two colours, showing they understand several ways can make 10
- Children naming both parts out loud, e.g. '7 and 3 makes 10', without being asked
- Children using the ten-frame tray to organise bricks into a clear row of 10 before transferring them into a tower
- Children solving a take-away problem in play, e.g. working out how many bricks are left after some fall from a tower of 10
- Children using 0 as a sensible answer, e.g. a tower with 0 of one colour and 10 of the other
- Children matching a number card to the amount of each colour in their finished tower

Small world

Add a 'Ten-Frame Garage' to the small world area: a floor mat or tray marked out as a two-row frame (5 spaces on top, 5 spaces on bottom, 10 spaces in total) alongside a small-world road, car park and car wash. Children park a set of toy cars into the frame and onto the surrounding road layout, physically splitting a set of 10 into two groups (parked and not parked, or at the car wash and not at the car wash) as they play.

Resources

- A two-row ten-frame mat or tray (5 spaces top row, 5 spaces bottom row) to use as the garage
- 10 small-world toy cars, 5 in one colour and 5 in another so parts are easy to see
- A small-world road mat with a car park, a car wash and a petrol station marked on it
- A set of number cards 0 to 10
- Small trays or garages (for example an egg box with 10 cups) so children can split the 10 cars into two groups in different ways
- A few small-world figures (drivers) so cars can be matched 1 to 1 with a driver, up to 10

When you join the play

- How many cars have you parked in the garage? How many are still out on the road? How many cars are there altogether?
- You've got 10 cars. If 6 go through the car wash, how many are left waiting on the road?
- Can you park the cars so there's the same number on the top row as the bottom row?
- What if 0 cars are in the garage and all 10 are out on the road – is that still 10 cars altogether?
- You had 10 cars and 3 drove away. How many are left now?
- Can you find a different way to split your 10 cars into two parking spots?

Look for

- Children splitting a group of 10 cars into two parts without being asked, for example 5 and 5 or 2 and 8
- Children re-counting all 10 cars to check the total after moving some away
- Children matching rows on the ten frame and noticing when both rows look the same, for example 5 and 5
- Children using the word 'none' or the numeral 0 to describe an empty row or empty space
- Children solving a take-away in play, for example moving cars away from 10 and saying how many are left
- Children independently repeating the same split of 10 in a new way, for example trying 4 and 6 after trying 3 and 7

Outdoors

A giant skittle alley set up on the grass or playground, next to a chalk-drawn ten-frame 'scoreboard' on the tarmac. Children roll a ball at 10 skittles, then use the ten-frame and loose parts to show how many skittles are down and how many are still standing, exploring all the ways 10 can be split.

Resources

- 10 skittles (or washed-out plastic bottles weighted with sand)
- 2 or 3 soft balls of different sizes
- A giant ten-frame drawn in chalk on the tarmac (two rows of 5 boxes)
- A tub of loose parts to mark the frame: pebbles, conkers, pinecones or bottle tops (10 of each kind)

- A washing line strung between two posts with 10 pegs and a set of 0 to 10 numeral flags
- Chalk and a clipboard-free whiteboard easel for drawing (not for writing sums)
- A tuff spot or crate for sorting 'standing' skittles and 'down' skittles

When you join the play

- You knocked some skittles down and some are still standing — how many down, how many standing, and how do they make 10 altogether?
- Can you show that on the chalk ten-frame with the pebbles?
- What if you knocked down 0 skittles — how many would still be standing?
- Is there another way to roll the ball so a different number falls, but it still makes 10 with the ones left standing?
- You've got 5 down and 5 standing — is that the same as 5 standing and 5 down, or different?
- If 4 fall down, how many do we need to take away from 10 to check how many are left?
- Can you peg the two numbers that make 10 next to each other on the washing line?

Look for

- Children count the fallen and standing skittles separately and check the two parts make 10 altogether
- Children use the ten-frame or their fingers to represent the split instead of only counting skittles
- Children notice that swapping which group is bigger (for example 2 and 8, then 8 and 2) still makes 10
- Children recognise 0 as a possible result (0 down and 10 standing, or 10 down and 0 standing)
- Children spot the 5 and 5 'double' as a special way of making 10
- Children use subtraction language, such as '10 take away the ones down leaves the ones standing'
- Children peg matching pairs on the washing line in the correct order (0 to 10 and 10 to 0)

Malleable (playdough)

A playdough bakery enhancement where children roll playdough 'buns' and press them into a large ten-frame tray or a 10-cup egg box, then split their buns between two plates to explore all the ways to make 10, alongside number bonds and taking away.

Resources

- Playdough in several colours, one ball per child
- Laminated large ten-frame mats (two rows of five)
- Empty 10-cup egg boxes
- Small paper plates, two per child, for splitting buns into two groups
- Numeral cards 0 to 10
- Small bun/cupcake cutters and rolling pins
- Mini candles or buttons for pressing into buns (10 per tub)
- Small bowls for 'taking away' buns that are sold or eaten

When you join the play

- You've made 10 buns altogether. If 4 are on this plate, how many must be on the other plate?
- Can you fill the whole ten frame with buns, then show me a different way to split your 10 buns between the two plates?
- What happens if you take 3 buns away from your 10? How many are left?
- You have 0 buns on one plate and 10 on the other. Does that still make 10?
- Can you make 2 equal plates from your 10 buns, so each plate has the same amount?
- If one customer buys 6 buns from your 10, how many are left for the next customer?

Look for

- Children filling a ten frame with playdough buns and noticing when it is full at 10
- Children splitting 10 buns across two plates in different combinations, such as 3 and 7 or 5 and 5
- Children using the egg box's 10 spaces to check they have made exactly 10
- Children explaining that 0 and 10 still make 10 when one plate is empty
- Children physically removing buns to model taking away and counting what is left
- Children spotting that 5 and 5 gives two equal plates (doubles)

Role play shop

Turn the role play shop into a 'make 10' till point: a basket of priced goods, two small trays as a part-whole mat, and a 10-frame price board so children build and swap pairs that make 10 as they buy, sell and pack bags.

Resources

- Role play till with a 10-space tray or egg box acting as a ten frame
- Small shop items or empty packets, each labelled with a price from 0 to 10
- Pretend coins or counters (plenty of 1s), kept in a pot by the till
- Two small baskets or plates labelled 'in my bag' and 'still to pay' as a part-whole mat
- A5 cards showing the pairs that make 10, for children to peg up as they find them
- Shopping bags or purses for carrying coins and goods
- A laminated 10-frame mat for lining up coins or goods in a row of 10

When you join the play

- You've put 3 coins in your purse. How many more do you need so the till shows 10?
- If 6 of the 10 frame is full, how many empty spaces are left?
- You've got 0 pennies left, how many do you need to make 10?
- Can you find two prices on the shelf that make 10 when you add them together?
- You paid with 10 and the toy costs 4, how much change should I give you?
- Let's fill the ten frame with your shopping, how many more boxes do we need?

Look for

- Children filling a ten frame and naming how many more are needed to make 10



- Children pairing priced items that total 10 without being asked
- Children using fingers, coins or counters to check a pair makes 10
- Children recalling a bond to 10 straight away, such as knowing 7 needs 3
- Children acting out take away at the till, counting back from 10
- Children including 0 in their talk, such as 'none left and 10 to pay'